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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/829,098	04/21/2004	Takahiro Tokunaga	4041K-000197	6007

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EXAMINER

FORD, JOHN K

ART UNIT

PAPER NUMBER

3753

DATE MAILED: 03/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/829,098

Applicant(s)

TOKUNAGA ET AL.

Examiner

John K. Ford

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 1/18/06 (filing of RCE)
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 6, 7, 9, 10, 18-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 6, 7, 9, 10, 18-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 1/18/06 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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Applicant's election of Group I, drawn to a combined heating and cooling system, without traverse, is acknowledged. Within that Group, applicant has further elected the species of Figures 1-5, without traverse, and has identified claims 1, 6, 7, 9, 10 and 18-22 as readable on the elected species. Non-elected claims 2-5, 8 and 11-17 have been cancelled.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 6, 7, 9, 10 and 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of DT 3229866 in view of WO 98/12060 or GB 2121879 and JP 2001315526 and Faulhaber (US 2,804,756).

DT '866 has a blower 5, air conditioner casing 1, cooling unit 3, heater 2, airflow rate adjustment means 7 and an air mix chamber (in the vicinity of reference numeral 32). The airflow rate adjustment means 7 changes the flow direction of air discharged from blower 5 to proportion it between the cold air passage containing cooling unit 3 and the warm air passage (adjacent entrance 17) containing the heater unit 2. Blower 5 does not have a movable casing.

GB 2121879, in Figure 2, teaches a blower of the type disclosed by DT '866 (i.e., a centrifugal type) in which a position of the blower casing 14 is changed by moving it in the direction of the double-headed arrows to vary the proportion of air discharged into passage V1 and V2. At one extreme casing position, all of the air would be discharged into V1 and at the other extreme casing position; all of the air would be discharged into V2. Similarly, WO 98/12060 teaches a rotatable blower casing 30 that permits air to be blown through a heat exchanger 50 or through another conditioning passage, bypassing the heat exchanger 50.

JP 20011315526 (Figure 8) teaches arranging a plurality of heat exchangers 30, 31 and 32 partially encircling a blower 15 as measured from the axis 15a of the blower 15 and equidistantly from the blower.

To have replaced the blower/damper combination of DT '866 (i.e. elements 5 and 7) with the blower/rotary casing of GB 2121879 (shown in Figure 2) or the blower/rotary casing of WO 98/12060, (i.e. discharging passage 12 of GB 2121879 into the cooler of DT '866 and discharging passage 13 of GB 2121879 into the heater of DT '866 and analogously for WO 98/12060) would have been obvious to one of ordinary skill in the art because GB '879 and WO '060 advantageously teach they take up only little space and are specially short in length (page 2, lines 26-27 of GB '879).

Furthermore, to have arranged the heat exchangers 2 and 3 in DT '866 equidistantly from the blower to improve airflow by making the fluid resistances approximately equal would have been obvious from the teaching of JP 20011315526 (Figure 8 teaching arranging a plurality of heat exchangers 30, 31 and 32 arranged equidistantly around the axis 15a of a blower 15).

One of ordinary skill seeking to design a compact air conditioning system for a trunk mounted air conditioner unit in a sedan would have had the requisite motivation to make the substitution for the purpose of advantageously obtaining a more compact air conditioner thereby freeing up space in the passenger compartment. Specifically, in regard to the latter trunk location now being claimed, Faulhaber fairly teaches a slanting casing section 49b in Figure 4 that follows the slant of the rear seat, an obvious shape to have given the casing of the prior art (described above) when installing it into the trunk of a car to advantageously take up less space.


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The examiner somewhat serendipitously discovered two pieces of prior art assigned to Denso that disclose trunk mounted air-conditioning units (see JP 2000-309221 and Miyata (US 6,093,096)). Is there other prior art of Denso origin that disclose trunk mounted AC units that the Examiner should be aware of?

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Novitsky (US 3,147,909) relates to a fan with a movable shroud to direct airflow to a particular passageway and Jacobs (US 2,781,642) to another trunk mounted AC unit that has a sloping wall matching that of the rear seat.

Any inquiry concerning this communication should be directed to John K. Ford at telephone number 571-272-4911.



**John K. Ford**  
**Primary Examiner**